In the claims:

1. (Previously Deleted) In a removable media disk drive having a harmonic disturbance induced by rotation of the media, reading means for reading a signal from the rotating media, a phase-locked loop connected to the reading means, the phase-locked loop recovering a reference signal from a signal on the media, and a harmonic corrector for reducing the effects of the harmonic disturbance on the phase-locked loop.

2. (Previously Deleted) The apparatus of Claim 1 where the phase error in the phase locked loop is detected with a mixer.

3. (Previously Deleted) The apparatus of Claim 1 where the phase error in the phase locked loop is detected with a phase detector.

4. (Previously Deleted) The apparatus of Claim 1 where the phase-locked loop is a harmonic locking loop.

5. (Previously Deleted) The apparatus of Claim 1 where the phase-locked loop is a Costas loop.

6. (Previously Deleted) The apparatus of Claim 1 where the harmonic corrector is applied to the phase-locked loop continuously.

7. (Previously Deleted) The apparatus of Claim 1 where the harmonic corrector is applied to the phase-locked loop once a predetermined set of loop conditions have been met.

8. (Previously Deleted) The apparatus of Claim 1 where the harmonic corrector removes the harmonic disturbance from the phase-locked loop.

9. (Previously Deleted) The apparatus of Claim 1 where the harmonic corrector causes the phase-locked loop to track the harmonic disturbance.

10. (Previously Deleted) The apparatus of Claim 8 where the harmonic corrector is a filter connected between the reading means and the phase-locked loop, reducing the harmonic disturbance passed to the phase-locked loop.

11. (Previously Deleted) The apparatus of Claim 9 where the harmonic corrector is a resonant filter increasing the loop gain of the phase-locked loop at the harmonic disturbance.

12. (Previously Deleted) The apparatus of Claim 9 where the harmonic corrector is an integrating pole added to the phase locked loop.

13. (Previously Deleted) The apparatus of Claim 9 where the harmonic corrector is a feedforward corrector.

14. (Previously Deleted) The apparatus of Claim 9 where the harmonic corrector is a repetitive controller.

15. (Previously Deleted) The apparatus of Claim 13 where the feedforward corrector comprises means for generating a sinusoid at a phase and frequency so as to cancel the harmonic disturbance.

16. (Previously Deleted) The apparatus of Claim 14 where the feedforward corrector comprises:

> means for collecting residual errors from the harmonic disturbance on one or more rotations of the media;

> means for filtering the residual errors; and

> means for feeding forward the filtered residual errors.

17. (Presently Amended) ~~In a removable media disk drive having a harmonic disturbance induced by rotation of the media, reading means for reading a signal from the rotating media, a phase-locked loop connected to the reading means, the phase-locked loop recovering a reference signal from a signal on the media, the~~

3

<u>A</u> method of reducing the effects of the harmonic disturbance on <u>a</u> ~~the~~ phase-locked loop comprising<u>:</u>

<u>reading a signal from a rotating media;</u>

<u>recovering a reference signal from the rotating media with the phase-locked loop;</u>

applying a harmonic correction to the phase-locked loop[.]<u>, the harmonic correction being generated by notch filtering harmonic content from the reference signal, the harmonic content being induced by rotation of the media.</u>

18. (Original) The method of claim 17 where the correction is applied to the phase locked loop continuously.

19. (Original) The method of claim 17 where harmonic correction to the phase-locked loop is switched in and out.

20. (Deleted) The method of claim 17 where the method of applying harmonic correction to the phase-locked loop comprises filtering the signal between the reading means and the phase-locked loop, reducing the harmonic disturbance passed to the phase-locked loop.

21. (Presently Amended) ~~The method of Claim 17 where the method of applying harmonic correction to the phase-locked loop comprises~~ A method of reducing the effects of the harmonic disturbance on a phase-locked loop comprising:

<u>reading a signal from a rotating media;</u>

<u>recovering a reference signal from the rotating media with the phase-locked loop;</u>

adding a resonant filter to the phase locked loop, the resonant filter increasing the loop gain of the phase-locked loop at ~~the~~ a harmonic disturbance<u>, the harmonic disturbance being induced by rotation of the media.</u>

22. (Presently Amended) ~~The method of claim 17 where the method of applying harmonic correction to the phase-locked loop comprises:~~ A method of reducing the effects of the harmonic disturbance on a phase-locked loop comprising:

   reading a signal from a rotating media;

   recovering a reference signal from the rotating media with the phase-locked loop;

   generating a sinusoid at ~~the~~ a same phase and frequency as ~~the~~ a harmonic disturbance, the harmonic disturbance being induced by rotation of the media, and

   feeding forward the generated sinusoid so as to cancel the harmonic disturbance.

23. (Presently Amended) ~~The method of claim 17 where the method of applying harmonic correction to the phase-locked loop comprises:~~ A method of reducing the effects of the harmonic disturbance on a phase-locked loop comprising:

   reading a signal from a rotating media;

   recovering a reference signal from the rotating media with the phase-locked loop;

   collecting residual errors from [the] a harmonic disturbance over one or more rotations of the media, the harmonic disturbance being induced by rotation of the media,

   filtering the residual errors, and

   feeding forward the filtered residual errors.

24. (Presently deleted) The method of Claim 17 where the loop is a harmonic locking loop.

25. (Presently deleted) The method of Claim 17 where the loop is a Costas loop.

26. (Presently deleted) The method of Claim 17 where the phase error in the phase locked loop is detected with a mixer.

27. (Presently deleted) The method of Claim 17 where the phase error in the phase locked loop is detected with a phase detector.